

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method to treat viral infection in mammals, the method comprising:

receiving an effective amount of at least one of a plurality of compositions targeting a
5 plurality of microtubule processes in mammalian cells, the effective amount being delivered by parental routes of administration to reduce non-dermal viral infections for viruses utilizing the plurality of microtubule processes in mammalian cells.

10 2. The method of Claim 1, wherein the plurality of compositions targeting the microtubule process in mammalian cells includes taxanes, taxoids, discodermolide, epothilones A, epothilone B, eleutherobin, taccalonolide, colchicine, colcemid, demecolcine, vincristine, vinepidine, vindesine, vinblastine, vinorelbine, desformyl vincristine, desacetyl desformyl vincristine, vinflunine, phomopsin A, ustiloxins, cryptophycins, halichondrins, estramustine, rhizoxin, and nocodazole.

15 3. The method of Claim 2, wherein the plurality of compositions further includes solubilizers, parenteral solutions, and analgesics .

20 4. The method of Claim 3, wherein the parenteral solutions are water-based and includes saline, lactose, sucrose, sorbitol, mannitol, starches, gum acacia, calcium phosphate, alginates, tragacanth, gelatin, calcium silicate, cellulose, methyl cellulose, microcrystalline cellulose, and polyvinylpyrrolidone.

5. The method of Claim 1, wherein the parental route of administration includes intervascular injections, intermuscular injections, interdermal injections, interspinal injections, and intercerebral injections.

25 6. The method of Claim 1, wherein the viruses utilizing the microtubule process in mammalian cells includes Herpesvirus-1 (HSV-1), Herpesvirus-2 (HSV-2), Cytomegalovirus (CMV), Varicella-Zoster Virus (VZV), Epstein Barr virus (EBV), Herpes Simplex 6 (HSV-6), Herpes Simplex 7 (HSV-7), Herpes Simplex 8 (HSV-8), human Papilloma Virus (HPV), Vaccinia Virus (VV), Adenovirus, Parvovirus, Human Infectivity Virus (HIV), and rabies virus.



25315

PATENT TRADEMARK OFFICE

7. The method of Claim 1, wherein the parental route of administration includes filling a syringe with an effective amount of at least one of the plurality of compositions to reduce viral infections into the syringe, injecting the effective amount into a mammal, assessing whether virus reductions in virus infections are manifested as improvements in clinical signs presented by the mammal, and re-injecting the effective amount until reductions in virus infections are manifested as improvements in clinical signs presented by the mammal.

8. A method to treat viral infection in mammals, the method comprising:

receiving an effective amount of at least one of a plurality of compositions targeting a plurality of microtubule processes in mammalian cells, the effective amount being delivered by oral, anal, aural, ocular and nasal routes of administration to reduce viral infections for viruses utilizing the plurality of microtubule processes in mammalian cells.

9. The method of Claim 8, wherein the plurality of compositions targeting the microtubule process in mammalian cells includes taxanes, taxoids, discodermolide, epothilones A, epothilone B, eleutherobin, taccalonolide, colchicine, colcemid, demecolcine, vincristine, vinepidine, vindesine, vinblastine, vinorelbine, desformyl vincristine, desacetyl desformyl vincristine, vinflunine, phomopsin A, ustiloxins, cryptophycins, halichondrins, estramustine, rhizoxin, and nocodazole.

10. The method of Claim 8, wherein the plurality of compositions further includes solubilizers, solutions, and analgesics.

11. The method of Claim 10, wherein the solutions are water-based and includes saline, lactose, sucrose, sorbitol, mannitol, starches, gum acacia, calcium phosphate, alginates, tragacanth, gelatin, calcium silicate, cellulose, methyl cellulose, microcrystalline cellulose, polyvinylpyrrolidone includes and syrup.

12. The method of Claim 8, wherein the viruses utilizing the microtubule process in mammalian cells includes Herpesvirus-1 (HSV-1), Herpesvirus-2 (HSV-2), Cytomegalovirus (CMV), Varicella-Zoster Virus (VZV), Epstein Barr virus (EBV), Herpes Simplex 6 (HSV-6), Herpes Simplex 7 (HSV-7), Herpes Simplex 8 (HSV-8), human Papilloma Virus (HPV), Vaccinia Virus (VV), Adenovirus, Parvovirus, Human Infectivity Virus (HIV), and rabies virus.



25315

PATENT TRADEMARK OFFICE

13. The method of Claim 8, wherein the oral, anal, aural, ocular, and nasal routes of administration includes filling a container with an effective amount of at least one of the plurality of compositions for reducing viral infections, transferring the effective amount from the container into a mouth, anus, ear, eye or nose of a mammal, assessing whether virus
5 reductions in virus infections are manifested as improvements in clinical signs presented by the mammal, and re-transferring the effective amount into the mouth, anus, ear, eye or nose of the mammal until reductions in virus infections are manifested as improvements in clinical signs presented by the mammal.

14. A method to treat viral infection in mammals, the method comprising:

10 receiving an effective amount of at least one of a plurality of compositions targeting a microtubule process in mammalian cells, the effective amount being delivered by a topical route of administration to reduce viral infections in dermal lesions and inflamed areas for viruses utilizing the microtubule processes in mammalian cells.

15 15. The method of Claim 14, wherein the plurality of compositions targeting the microtubule process in mammalian cells includes taxanes, taxoids, discodermolide, epothilones A, epothilone B, eleutherobin, taccalonolide, colchicine, colcemid, demecolcine, vincristine, vinepidine, vindesine, vinblastine, vinorelbine, desformyl vincristine, desacetyl desformyl vincristine, vinflunine, phomopsin A, ustiloxins, cryptophycins, halichondrins, estramustine, rhizoxin, and nocodazole.

20 16. The method of Claim 14, wherein the plurality of compositions further includes solubilizers, lubricants, emulsifiers, waxes, solutions, preservatives, humectants, and analgesics .

25 17. The method of Claim 16, wherein the solutions includes parenteral are water-based and includes saline, lactose, sucrose, sorbitol, mannitol, starches, gum acacia, calcium phosphate, alginates, tragacanth, gelatin, calcium silicate, cellulose, methyl cellulose, microcrystalline cellulose, polyvinylpyrrolidonenormal, and syrup.

18. The method of Claim 16, wherein the solubilizers includes dimethy sulfoxide (DMSO), alcohol, petrolatum, and corn oil.

30 19. The method of Claim 14, wherein the viruses utilizing the microtubule process in mammalian cells includes Herpesvirus-1 (HSV-1), Herpesvirus-2 (HSV-2), Cytomegalovirus (CMV), Varacella-Zoster Virus (VZV), Epstein Barr virus (EBV), Herpes Simplex 6 (HSV-



25315

PATENT TRADEMARK OFFICE

20. The method of 14, whereby the topical route of administration comprises
5 contacting the dermal lesions and inflamed areas with at least one of the plurality of
compositions, rubbing the composition into the dermal lesions and inflamed areas, and re-
contacting and re-rubbing the dermal lesions and inflamed areas until the dermal lesions and
inflamed areas are resolved.

THE UNIVERSITY OF CHICAGO

Abstract

PATENT TRADEMARK OFFICE